Form 1449* INFORMATION DISCLOSURE STATEMENT IN AN APPLICATION	Docket Number: G&C 176.19-US-U1	Application Number: 10/849,764
	Applicant: Mladen Barbic	
	Filing Date: May 20, 2004	Group Art Unit: 2878

U.S. PATENT DOCUMENTS

EXAMINER INITIAL	DOCUMENT NO.	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE

FOREIGN PATENTS

	DOCUMENT NO.	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION YES	TRANSLATION NO

NON-PATENT DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

		[3] P. C. Lauterbur, IMAGE FORMATION BY INDUCED LOCAL INTERACTIONS: EXAMPLES EMPLOYING NUCLEAR MAGNETIC RESONANCE, Nature (London) 242-243, 190 (1973).
		[4] P. Mansfield et al., NMR 'DIFFRACTION' IN SOLIDS?, J. Phys. C 6, L422-l426, (1973).
		[8] J. Aguayo et al., NUCLEAR MAGNETIC RESONANCE IMAGING OF A SINGLE CELL, Nature (London) 322, 190-191, (1986).
		[9] S. C. Lee *et al.*, COMMUNICATIONS: ONE MICROMETER RESOLUTION NMR MICROSCOPY, J. Magn. Reson. 150, 207-213, (2001).
		[12] P. Mansfield et al., "DIFFRACTION" AND MICROSCOPY IN SOLIDS AND LIQUIDS BY NMR, Phys. Rev. B 12, 3618-3634 (1975).
		[13] J. A. Sidles, NONINDUCTIVE DETECTION OF SINGLE-PROTON MAGNETIC RESONANCE, Appl. Phys. Lett. 58, 2854-2856, (1991).
		[14] J. A. Sidles et al., MAGNETIC RESONANCE FORCE MICROSOCPY, Rev. Mod. Phys. 67, 249-265 (1995).
		[15] D. Rugar et al. MECHANICAL DETECTION OF MAGNETIC RESONANCE, Nature (London) 360, 563-566 (1992).
		[16] D. Rugar et al., FORCE DETECTION OF NUCLEAR MAGNETIC RESONANCE, Science 264, 1560-1563, (1994).

EXAMINER: DATE CONSIDERED: 7-20-05

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		[17] Z. Zhang et al. OBSERVATION OF FERROMAGNETIC RESONANCE IN A MICROSCOPIC SAMPLE USING MAGNETIC RESONANCE FORCE MICROSCOPY, Appl. Phys. Lett. 68, 3-pgs., 2005-2007, (1996).
		[18] K. Wago et al., LOW-TEMPERATURE MAGNETIC RESONANCE FORCE DETECTION, J. Vac. Sci. Technol. B 14, 1197-1201, (1996).
		[19] K. J. Bruland et al., FORCE-DETECTED MAGNETIC RESONANCE IN A FIELD GRADIENT OF 250 000 TESLA PER METER, Appl. Phys. Lett. 73(21), 3159-3161, (1998).
		[20] B. C. Stipe et al. MAGNETIC DISSIPATION AND FLUCTUATIONS IN INDIVIDUAL NANOMAGNETS MEASURED BY ULTRASENSITIVE CANTILEVER MAGNETOMETRY, Phys. Rev. Lett. 86, 2874-2877, (2001).
		[21] T. D. Stowe et al., ATTONEWTON FORCE DETECTION USING ULTRATHIN SILICON CANTILEVERS, Appl. Phys. Lett. 71, 288-290, (1997).
		[22] O. Zuger et al., FIRST IMAGES FROM A MAGNETIC RESONANCE FORCE MICROSCOPE Appl. Phys. Lett. 63, 2496-2498, (1993).
		[23] O. Zuger et al., THREE-DIMENSIONAL IMAGING WITH A NUCLEAR MAGNETIC RESONANCE FORCE MICROSCOPE, J. Appl. Phys. 79, 1881-1884, (1996).
		[24] M. Barbic, MAGNETIC RESONANCE DIFFRACTION USING THE MAGNETIC FIELD FROM A FERROMAGNETIC SPHERE, J. Appl. Phys. 91, 9987-9994, (2002).
		[25] M. Barbic et al.SAMPLE-DETECTOR COUPLING IN ATOMIC RESOLUTION MAGNETIC RESONANCE DIFFRACTION, J. Appl. Phys. 92, 7345-7354, (2002).
		[27] P. Streckeisen et al., INSTRUMENTAL ASPECTS OF MAGNETIC RESONANCE FORCE MICROSCOPY, Appl. Phys. A: Mater. Sci. Process. A66, S341-S344, (1998).
		[28] C. Petit, SELF-ORGANIZATION OF MAGNETIC NANOSIZED COBALT PARTICLES**, Adv. Mater. (Weinheim, Ger.) 10, 259-261, (1998).
		[29] S. Sun et al., MONODISPERSE FePt NANOPARTICLES AND FERROMAGNETIC FePt NANOCRYSTAL SUPERLATTICES, Science 287, 1989-1992, (2000).
		[30] A. F. Puntes et al., COLLOIDAL NANOCRYSTAL SHAPE AND SIZE CONTROL: THE CASE OF COBALT, Science 291, 2115-2117, (2001).

EXAMINER:	DATE CONSIDERED: 7.29.05

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	Filing Date: May 20, 2004	Group Art Unit: 2878

	B	[31] T. Hyeon et al., SYNTHESIS OF HIGHLY CRYSTALLINE AND MONODISPERSE MAGHEMITE NANOCRYSTALLITES WITHOUT A SIZE-SELECTION PROCESS, J. Am. Chem. Soc. 123, 12798-12801, (2001).
		[32] D. R. Baselt et al., A HIGH SENSITIVITY MICROMACHINED BIOSENSOR, Proc. IEEE 85, 672-680, (1997).
		[33] M. A. Lantz et al., HIGH RESOLUTION EDDY CURRENT MICROSCOPY, Appl. Phys. Lett. 78, 383-385, (2001).
		[34] T. Ono et al., MAGNETIC FORCE AND OPTICAL FORCE SENSING WITH ULTRATHIN SILICON RESONATOR, Rev. Sci. Instrum. 74, 5141-5146, (2003).
		[46] P. J. McDonald et al., STRAY FIELD MAGNETIC RESONANCE IMAGING, Rep. Prog. Phys. 61, 1441-1493, (1998).
		[47] D. I. Hoult et al., THE QUANTUM ORIGINS OF THE FREE INDUCTION DECAY SIGNAL AND SPIN NOISE, J. Magn. Reson. 148, 182-199, (2001).
		[48] J. A. Sidles et al., THE CLASSICAL AND QUANTUM THEORY OF THERMAL MAGNETIC NOISE, WITH APPLICATIONS IN SPINTRONICS AND QUANTUM MICROSCOPY, Proc. IEEE 91, 799-816, (2003).
		[49] J. D. Hannay et al., THERMAL FIELD FLUCTUATIONS IN A MAGNETIC TIP/IMPLICATIONS FOR MAGNETIC RESONANCE FORCE MICROSCOPY, J. Appl. Phys. 87, 6827-6829, (2000).
		[51] L. R. Narasimhan et al., SQUID MICROSUSCEPTOMETRY IN APPLIED MAGNETIC FIELDS, IEEE Trans. Appl. Supercond. 9, 3503-3506, (1999).
		[52] G. Boero et al.,HALL DETECTION OF MAGNETIC RESONANCE, Appl. Phys. Lett. 79, 1498-1500, (2001).
		[53] R. D. Black *et al.*, A HIGH-TEMPERATURE SUPERCONDUCTING RECEIVER FOR NUCLEAR MAGNETIC RESONANCE MICROSCOPY, Science 259, 793-795, (1993).
		[54] S. Zhang et al., HIGH-SENSITIVTY FERROMAGNETIC RESONANCE MEASUREMENTS ON MICROMETER-SIZED SAMPLES, Appl. Phys. Lett. 70, 2756-2758, (1997).
	B	[55] F. Bloch, NUCLEAR INDUCTION, Phys. Rev. 70, 460-474, (1946).

EXAMINER:	DATE CONSIDERED: 7.28.05

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	Applicant: Mladen Barbic	
	Filing Date: May 20, 2004	Group Art Unit: 2878

		[57] J. G. Kempf et al., NANOSCALE FOURIER-TRANSFORM IMAGING WITH MAGNETIC RESONANCE FORCE MICROSCOPY, Phys. Rev. Lett. 90, 087601-4 (2003).
		[58] E. E. Sigmund et al., HOLE-BURNING DIFFUSION MEASUREMENTS IN HIGH MAGNETIC FIELD GRADIENTS, J. Magn. Reson. 163, 99-104, (2003).
		[59] G. Binning, H. Rohrer, SURFACE STUDIES BY SCANNING TUNNELING MICROSCOPY, Phys. Rev. Lett. 49, 57-61, (1982).
		[60] G. Binning, et al., ATOMIC FORCE MICROSCOPE, Phys. Rev. Lett. 56, 930- 934, (1986).
		[61] R. Wiesendanger, OBSERVATION OF VACUUM TUNNELING OF SPIN-POLARIZED ELECTRONS WITH THE SCANNING TUNNELING MICROSCOPE, Phys. Rev. Lett. 65, 247-251, (1990).
		[62] Y. Manassen et al., DIRECT OBSERVATION OF THE PRECESSION OF INDIVIDUAL PARAMAGNETIC SPINS ON OXIDIZED SILICON SURFACES, Phys. Rev. Lett. 62, 2531-2535, (1989).
		[63] C. Durkan et al., ELECTRONIC SPIN DETECTION IN MOLECULES USING SCANNING-TUNNELING-MICROSCOPY-ASSISTED ELECTRON-SPIN RESONANCE, Appl. Phys. Lett. 80, 458-460, (2002).
		[66] J. Sanny et al., MICROWAVE ELECTRON SPIN RESONANCE SPECTROMETER WITH OPERATION TO 54 Mk IN A DILUTION REFRIGERATOR, *Rev. Sci. Instrum.* **52**, 539-541, (1981).
		[67] H. Mahdjour et al., HIGH-SENSITIVITY BROADBAND MICROWAVE SPECTROSCOPY WITH SMALL NONRESONANT COILS, *Rev. Sci. Instrum.* **57**, 1100-1106, (1986).
		[68] D. L. Olson et al., HIGH-RESOLUTION MICROCOIL ^{1}H-NMR FOR MASS-LIMITED, NANOLITER-VOLUME SAMPLES, *Science* **270**, 1967-1970, (1995).
		[70] D. A. Seeber et al., TRIAXIAL MAGNETIC FIELD GRADIENT SYSTEM FOR MICROCOIL MAGNETIC RESONANCE IMAGING, *Rev. Sci. Instrum.* **71**, 4263-4272 (2000).

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		[71] L. Ciobanu et al., 3D MR MICROSCOPY WITH RESOLUTION 3.7um BY 3.3 um BY 3.3um, *J. Magn. Reson.* **158**, 178-182, (2002).
		[72] M. Barbic et al., ELECTROMAGNETIC MICROMOTOR FOR MICROFLUIDICS APPLICATIONS, *Appl. Phys. Lett.* **79:9**, 1399-1401, (2001).
		[73] M. Barbic et al., SCANNING PROBE ELECTROMAGNETIC TWEEZERS, *Appl. Phys. Lett.* **79:12**, 1897-1899, (2001).
		[74] M. Barbic, MAGNETIC WIRES IN MEMS AND BIO-MEDICAL APPLICATIONS, *J. Magn. Mag. Mater.* **249**, 357-367, (2002).
		[75] M. Todorovic et al., MINIATURE HIGH-SENSITIVITY QUARTZ TUNING FORK ALTERNATING GRADIENT MAGNETOMETRY, *Appl. Phys. Lett.* **73**, 3539-3597 (1998).
		[76] J. A. Rogers et al., USING MICROCONTACT PRINTING TO FABRICATE MICROCOILS ON CAPILLARIES FOR HIGH RESOLUTION PROTON NUCLEAR MAGNETIC RESONANCE ON NANOLITER VOLUMES, *Appl. Phys. Lett.* **70**, 2464 – 2466, (1997).
		[77] Y. J. Kim et al., SURFACE MICROMACHINED SOLENOID INDUCTORS FOR HIGH FREQUENCY APPLICATIONS, *IEEE Trans. Compon. Pack. Manuf. C* **21**, 26-33, (1998).
		[78] G. Boero et al., FULLY INTEGRATED PROBE FOR PROTON NUCLEAR MAGNETIC RESONANCE MAGNETOMETRY, Rev. Sci. Instrum. 72, 2764-2768, (2001).
		[79] M. M. Midzor et al., IMAGING MECHANISMS OF FORCE DETECTED FMR MICROSCOPY, *J. Appl. Phys.* **87**, 6493-6495, (2000).
		[80] H. J. Mamin et al., SUBATTONEWTON FORCE DETECTION AT MILLIKELVIN TEMPERATURES, *Appl. Phys. Lett.* **79**, 3358-3360, (2001).
		[81] H. J. Mamin et al., SUPERCONDUCTING MICROWAVE RESONATOR FOR MILLIKELVIN MAGNETIC RESONANCE FORCE MICROSCOPY, *Rev. Sci. Instrum.* **74**, 2749-2753, (2003).
		[82] C. Ascoli et al., MICROMECHANICAL DETECTION OF MAGNETIC RESONANCE BY ANGULAR MOMENTUM ABSORPTION, *Appl. Phys. Lett.* **69**, 3920-3922(1996).

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		[83] M. Lohndorf et al., FERROMAGNETIC RESONANCE DETECTION WITH A TORSION-MODE ATOMIC-FORCE MICROSCOPE, *Appl. Phys. Lett.* **76**, 1176-1178, (2000).
		[84] J. Moreland et al., FERROMAGNETIC RESONANCE SPECTROSCOPY WITH A MICROMECHANICAL CALORIMETER SENSOR, *Rev. Sci. Instrum.* **71**, 3099-3103, (2000).
		[85] A. Jander et al., ANGULAR MOMENTUM AND ENERGY TRANSFERRED THROUGH FERROMAGNETIC RESONANCE, *Appl. Phys. Lett.* **78**, 2348-2350, (2001).
		[87] Ya. S. Greenberg, APPLICATION OF SUPERCONDUCTING QUANTUM INTERFERENCE DEVICES TO NUCLEAR MAGNETIC RESONANCE, *Rev. Mod. Phys.* **70**, 175-222, (1998).
		[88] H. Bergh, NONLINEAR COUPLING AND RADIATION DAMPING IN OSCILLATOR-DETECTED MAGNETIC RESONANCE OF SINGLE SPINS, *Meas. Sci. Technol.* **7**, 1019-1026, (1996).
		[89] A. Suter et al., PROBE-SAMPLE COUPLING IN THE MAGNETIC RESONANCE FORCE MICROSCOPE, *J. Magn. Reson.* **154**, 210-227, (2002).

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